5:Cooper E-4 (no date) 1946 SG4 Araucanians SG4

p. 66; Cooper, 1917, pp. 198–99; cf. Lothrop, 1932, pl. 21, c–d, and fig. 8, with details of construction of 7-plank dalca.)

Dugouts (lanampo, wampu (L. de Valdivia, 1887, huampu), canoes) were according to Rosales (1877–78, 1:174) usually small, with a crew of three men; the largest he had ever seen was one in Tolten with a carrying capacity of 30 persons. Of a crew of three, one man seated at the stern steered with a paddle, the other two paddled standing. Such dugouts were early reported from the Imperial (Baeza-Goñan, 1863, p. 88) region. (Cf. illustration from Gay, in Lothrop, 1932, pl. 16, h.)

Balsas of cigar-shaped bundles of various kinds of reeds, lashed with ropes made of voqui, and of new-moon shape, pointed at both ends, were in use on the mainland around the Imperial River, Tolten River, and elsewhere, and on the islands of Santa María and Mocha.

Other "balsas," apparently rafts proper, made of *Pupa* sp. or of "cypress" (*Libocedrus chilensis*) or "laurel" (*Laurelia aromatica*), all very light and buoyant, were also used on the Island of Santa María and on the mainland. The watercraft of inflated sealskins, of the north-central Chilean Coast, has not been reported from the *Mapuche-Huilliche* region.

Sails are reported as early as the middle 17th century, by Rosales (1877–78, 1:178), with the dugout when the wind was favorable, but it is uncertain whether they were used in pre-Spanish days (Friederici, 1937, p. 74). Details on type or types of paddles or oars used with early *Mapuche-Huilliche* watercraft are lacking. Lothrop (1932, p. 245, pl. 21, *f*) describes and figures a [European type?] two-piece oar with cruciform rounded shaft and flat square-ended blade, used with a Chilotan plank boat. Double-bladed paddles have been reported occasionally (Latcham, 1924).

MANUFACTURES

Basketry.—Various kinds of basketry containers were woven from plant fibers. Some of these more commonly recorded are: The lloa, made of *Chusquea*, of very fine weave; the chaiwa, made of voqui (*Boquila trifoliata*), small, serving as a filter for chicha or as a sieve or colander; the lloqui (fig. 74, *left*), of *Chusquea*, of flat round platter form; the lliffio (fig. 74, *right*), of *Lagenaria* rinds, a large basket; the yolo, of bejucos. (For techniques and types, cf. Claude Joseph, 1931, pp. 241–244.)

Cordage.—Various plant fibers, particularly from nocha (*Greigia landbeckii*) or maihuenko (*Oxalis rosea*), were used in the making of rope, cord, fish nets and lines, carrying bags (pilos), and baskets (figs. 73, 76). (For details, cf. Claude Joseph, 1931, pp. 244–248.)

Spinning and weaving.—Weaving with llama wool was well developed at the time of the Contact. Sheep wool was later substi-

5:Cooper E-4 (no date) 1946 SG4 Araucanians SG4

285

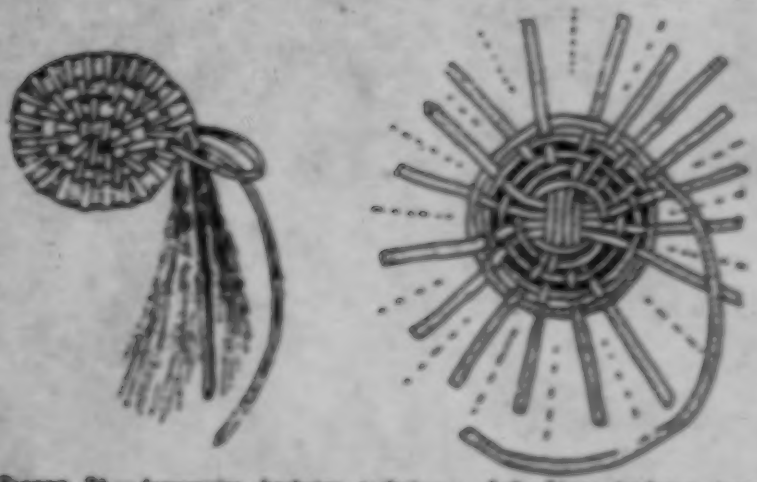


PLATE 76.—Araucanian basketry techniques. *Left*: Large basketry tray. *Right*: Riddle basket. (After Claude Joseph, 1931, figs. 30, 31, A.)

286

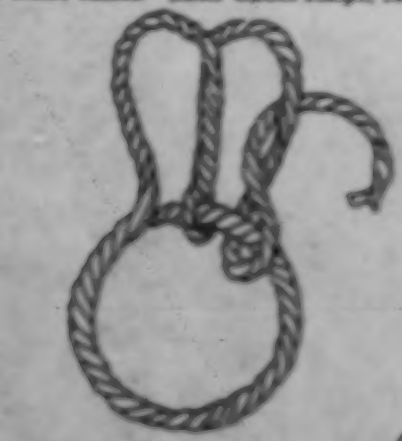


PLATE 77.—An Araucanian pillow showing back. *Top*: The front. *Bottom*: The top border braid. (After Claude Joseph, 1931, fig. 44.)

SMITHSONIAN MISCELLANEOUS COLLECTIONS

10: Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Chile

[illegible]. 1. Collector woman wearing cloth, used for carrying and storage. 2. A tightly woven basket, probably used for storage. (Courtesy Museo Nacional de Historia Natural, Santiago de Chile.) 3. Winnowing tray (Alepún). 4. A carrying and storage basket (Collarique). 5. A basket (chiwe) used as a filter, strainer, and drainer (Collarique).

285
415
[H92]

10: Hilger E-5 (1946-1952) 1957
SC4 Araucanians SC4
Chile

243
251
• 285

[p. 188(F)]

Drawing a chaplain, a saddle cover or throw for seats and leg bending (Chapter). a. Putting the warp on the loom. c. Ready to begin to weave. b. The completed chaplain.

19: Hilger E-S (1946-1952) 1957
SG4 Araucanians SG4
Chile

296 fringes. Belts for men and women are woven alike, except that a woman's is decidedly broader and shorter than a man's.

286 531 Designs used in weaving are usually conventional; they have no significance. Ponchos and shawls have no designs. Belts and headbands often have variolored stripes running lengthwise, or stripes of one color running crosswise near the ends. Ponchos are usually of one color, either gray, purplish gray, or silver-gray; an occasional one has woven in it a geometric design of some subdued color, usually black or brown (pl. 25, *i* and *s*). Blankets are generally of undyed white yarn with stripes of one color running lengthwise near the edges. Lamas are of one color, usually gray or brown, with stripes of a bright color in the wool, close to both ends.

BASKETRY

● 285 Cooper (1946, p. 713) lists several kinds of basketry made of plant fibers: the chalwe, made of vuqui and used as a filter for chicha or as a sieve or colander; the lliphi, a flat, round platter form made of cullulo; and the kilko, a large basket, made of cupiloun. He also gives the hapo and the yolo as basketry containers—the hapo, of very fine weave, made of cullulo; the yolo, of hojasca.

Basketry used by my informants were the wiñi (a carrying bag), the kilko (a carrying and storage basket), the chalwe (a sieve, drainage, filtering, and storage basket), and the lliphi (a winnowing tray).

285 493 Wiñi (pls. 12, *r*; 58, *t*) are netted from cord made of fiedra, a grass found in damp places. (See p. 101 for cord making.) Both adults and children make them. They vary in size from small ones, convenient for the use of small children, to large ones used in transporting fish to market. An in-between size is used for storage, being hung on fire racks or on pegs on rude walls. In shape a wiñi is either spherical or oblong. The opening ends either in a braid of three strands of fiedra through which a cord of fiedra is passed, or in loops of fiedra cord which are attached at intervals and through which a cord is inserted as a drawstring. A wiñi may have two short handles for carrying purposes or two long adjustable straps. Straps permit carrying by hand or suspension from the shoulder or the head. Handles and straps are braided fiedra.

For the making of a wiñi, a 13-year-old boy had gathered fiedra and laid it in the sun to dry. "Because we had so little sunshine and so much rain while I was making it," he explained, "it took me 8 days to make it. If my father had not helped me roll the cord, it

10: Hilger E-5 (1946-1952) 1957
SC4 Araucanians SC4
Chile

would have taken longer than that." The wiki was oblong in shape, 285 ●
13 inches deep, and 10 inches wide. Its meshes were ¼ by ¼ inch. It 952
had an adjustable 33-inch-long braided carrying strap. A 24-inch drawcord was attached in such a manner that the opening could be closed, or, if he wished to form compartments in the wiki, he could use the cord to lace the wiki either horizontally or vertically. Two bottles were then carried, in vertical position, one in each compartment; in one instance, eggs were placed in one compartment and tomatoes in the other. Choices for bindings were lessened thereby. A 6-year-old boy carried his school papers and six eggs in a spherical wiki. His mother had put the six eggs into the bottom, laced the wiki horizontally over them, and then put his school papers in the upper compartment and laced the opening. The mother had netted the wiki, but an older brother had enlarged the holes and made the cords. The wiki was 6 inches at greatest width, and 3 inches at the opening. A 30-inch carrying strap allowed it to be suspended from the shoulder, but since the boy was carrying eggs this day, he had shortened the strap and was carrying it by hand.

Kilkes are generally woven of vegetal by women specialists. The weaving must be loose enough to allow water to pass in and out of the basket "in case I want to wash potatoes of dirt, for example, as I walk home with them through a river." Collectjos women favor vegetal of the cogollear; it is found throughout the area. Some women use vegetal of guilgoil.

The kilkes shown in plate 48, *d*, were made of cogollear vegetal by a Collectjos woman (pl. 48, *f*) who had become a specialist in making these baskets to help support her family, her husband being a coalburner in the area. Her school-age children had obtained the vegetal from wooded lands nearby. The kilkes measured 12 inches across at the handle and 14 inches at right angles to it; the depth was 8 inches. In general, these baskets approximated 14 to 16 inches in height, 14 inches in width, and 8 to 10 inches in depth. Small kilkes were made for small children. "These were for useful purposes; not for play."

Chalons (pl. 48, *g*) are twined of vegetal of cogollear. They must be 285
so loosely made as to allow liquids to drain off freely. Specialists in kilkes making also make chalons. In general, chalons are pot shaped, and are from 8 to 10 inches at greatest diameter and from 6 to 9 inches in depth. The chalon illustrated is 10 inches at greatest diameter, 8½ inches at shortest diameter, and 8½ inches deep.

Llapis (winnowing trays) (pl. 48, *j*) are made of quila. Men make them, using the cull technique. "It takes a strong hand to do this weaving, for it has to be very tight." Their shape is that of a cracked

19: Hilger E-5 (1946-1952) 1957
SC4 Araucanians SC4
Chile

285 fruitage. If given reasonable care, a Rapé will give 10 years of service. The Rapés I saw were 2 to 4 inches deep, 14 to 15 inches in diameter at the bottom, 20 to 23 inches in diameter across the top, and 3 to 5 inches along slanting sides.

POTTERY MAKING

333 (462) Pottery making is the work of women. The traditional olles (pottery cooking containers) and chimeros (Araucanian containers, pl. 45, *f*) are still the chief articles made and are still used in many households. Schoolgirls older than 12 had made useful miniatures of olles and chimeros, and also wheels for spindles.

Brown and black clays are used in pottery making. An Alepún woman found black clay "for those chimeros, over the Pocillo; some around here [on the hills] is very good. I searched for three days and finally found this." Another woman had used brown clay. "I know one piece of land in which there is much of it; most of the women get it there."

As an adhesive, women were using finely ground pumice found both along river beds and on the shores of the Pocillo. "It is a smooth white stone; pounding it to powder takes longer than shaping an olla." A mixture of clay and pumice is saturated with water, and then well worked with the hands.

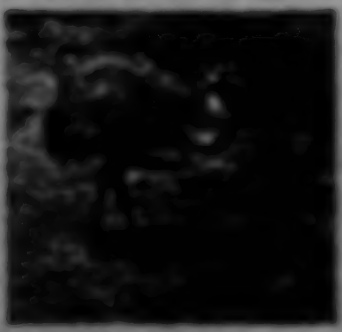
The coil method is used in making pottery. A woman wishing to make an olla must both hands to roll out a lump of clay on a hard surface. With this roll she forms the bottom of the olla—"the bottom decides the size of what I am making." From there on, the olla is built up with one continuous coil—the end of one roll and the beginning of the next are joined by being pinched together. As the building process proceeds, shaping is done. Also the woman, at certain stages, puts the molding with both hands simultaneously, with one on the outside and the other on the inside, and then smooths both inside and outside surfaces by rubbing them. Great care is exercised to make the inside surface very smooth—positively no rough spots must be left for food to adhere to. When completely molded the outer surface is made still smoother by being rubbed with the back of a mussel shell (*cauchull*) in Alepún area; and with the tip of a cow's horn in Pangipulli area. "But the inside, I again rub with my finger tips so I can feel any rough spots I may have missed."

The olla must be dried gradually; if dried fast, it may collapse. In general, it is kept away from the fire for a week—"It depends upon the weather." Then it is put into a wilid and hung at some distance

10: Migev E-S (1946-1952) 1957
SG4 Arevcaniase SG4
Argentina

859

136
285



622
281
214

1 and 2. Villagers wrestle traditional reeds for fodder. 1. Tola in which child is tied (Puno). 2. Bales in readiness under the protection of Puma Tiu crucis de Lares (Cuzco Lares). 3. A basket (Salta) used as a dairy and for carrying and storage (Tilcara). 4, 5 and 6. Are fundamental units of pottery, basketry and of spinning bowls. (3 and 4 courtesy of Museo Ing Boman, San Marcos de los Andes.)

[p. 364 (B)]

19. Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Argentina

cups for use at the gillatun (1952): some were 6-inch-high mug-shaped ones, some were 4-inch-high cup-shaped ones with a handle each, and some were lily-shaped ones without handles. 415

The pichuña was used in scooping apples from their peelings. One from Malleo (specimen No. 5, collection of Parque Nacional de Lanín) made of bone is 5 inches long, 1 inch wide, and approximately ¼ inch thick.

Baskets were of three types: the rewi, the lilliko (pl. 74, 4), and the lolliepin. All three were used for carrying; the rewi and lilliko, as sieves also; the lolliepin, for storage also. The small round seeds of quinoa were sifted from coarse chaff through the rewi; wheat is so sifted today. Hot sand used in toasting wheat was sifted from the wheat through the lilliko. Wheat was winnowed on a tiepul, a basketry winnowing tray. 415 285

Traditional implements are in use today; and so are factory-made ones, such as plates, cups, knives, forks, spoons, cooking utensils. Improvised utensils, such as tin cans to which wire handles were attached, were frequently seen (pls. 62, 1; 72, 1). 415

In the early days cooking was done over a fire in a shallow pit toward the front of the table. Smoke was emitted through an opening in the roof of the table directly over the fireplace. When weather permitted, cooking was done over an open pit outdoors. At present cooking is more often done on worn-down second-hand factory-made kitchen stoves, on heater stoves, or on improvised stoves made from oil drums. One man had made a stove by setting up two walls of brick about 4 feet apart and 18 inches high and putting over these a metal sheet; the front of the fireplace was left open. Today smoke is emitted between boards of walls and roof nearest the stove, or through a stovepipe led through a nearby wall, or ceremonially through the roof. In more instances a chimney is built of adobe brick. (Fig. 63, 1; 65, 1; 68, 2.) 252 354

A woman in Trumpul baked bread in an oil drum set in upright position (pl. 71, 1). The lower half of the drum was filled with sand. Pieces of tin rested on the sand and also across the opening of the drum. The space between these two pieces of tin was the oven. The woman built a fire on the windward side of the drum, and when it had burned down to glowing embers, she tested the heat of the oven with her hand. Finding it sufficiently hot, she placed a loaf of dough on the tin within the drum, replenished the embers with wood, and built a fire on the tin cover also. By the time both fires were burned to ashes, the bread was baked.

Open-pit fireplaces (pl. 72, 1) that I saw (they were said to be 354

10: Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Argentina

286 police for damaging trees if I take bark off of them or dig up roots that
386 I would like to use in dyeing. Then, too, dyes bought in stores are not too expensive, and there is considerably less work using them."

Today, as formerly, plant dyes are set by being boiled in human urine. Alum is used in setting commercial dyes, except purple; but it will not set plant dyes. Purple is set with a sulfate.

BASKETRY

285 Baskets were made by both men and women. Those used for carrying or for sifting coarse material and for threshing wheat with the feet were made of split colihüe stalks or colihüe rind (pl. 74, *4*); those used for finer sifting were made of the vine of weliüwel (unidentified). Winnowing trays were made of vine also; only men made these. Baskets were woven; winnowing trays were coiled.

POTTERY

323 Making pottery was the work of women. "Formerly, every adult woman knew how; today, few desire to learn the art." Today cántaros, ollas, pipes, cups, plates, and pifalka are made for use at the pilatun, and only an occasional woman makes some pieces for kitchen use (pl. 73).

Pottery was made of clay mixed with sand and the sap of maqui as adhesives. It was either modeled from a single lump or made of coils.

The most commonly used clay was yellowish-red, known as raq; it was found in many places. White clay (mallo), a rare kind, was more coveted; it was found only in certain spots near creeks. Most pottery found in excavations today was made of white clay. A woman prepared white clay for pottery making by working it into powder with her hands and then pushing it through a küiko (sieve) until it was nearly as fine as dust, when she mixed it well with the juice of crushed leaves of maqui, "a very sticky juice, indeed." The least desirable clay for pottery was chupad (mud). Kolupan told of green earth that was also used formerly; it was fetched from "a far away place where we went to get it."

There were no standard sizes or shapes of pottery; nor were models followed, except certain animal patterns which seem institutional (cf. pl. 76, *1*). In general, pottery was neither glazed nor decorated. A glaze could be produced by smearing the surface with maqui juice before the pottery cooled after being fired. Sometimes clay was mixed with sand containing mica for "mica made the pottery look pretty." Polishing was done with a smooth stone before firing.